

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application. Claims 2 and 11 have been canceled without prejudice or disclaimer. Claims 1, 4, 10, 13, 19 and 20 have been amended. No new matter has been added.

Claim Rejections under 35 U.S.C. §103

Claims 1-5 and 10-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hu, U.S. Patent No. 6,757,291 in view of Ghani, U.S. Patent No. 6,160,793 and Le, U.S. Patent No. 6,680,955; claims 6-9 and 15-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hu, in view of Ghani and Le as applied to claims 1 and 10 and further in view of Odenwald, U.S. Patent No. 6,310,884 and TechFest ("Ethernet Frame Structure" website); and claims 19-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hu in view of Ghani and Le.

The present invention is directed to a linking apparatus which is connected between a first network or communication line and a second network or communication line each having different line protocols in which the linking apparatus performs relaying of packets therebetween. In Hu, a three-way network server bypass device (100 and 101 in Figure 1) is provided that connects network 130 and SAN 110 to enable data transfer to be performed. In transferring data between the network 130 and SAN 110, server 120, which is connected to the three-way network server bypass device, is bypassed as disclosed in column 4, lines 5-55 of the reference. Although Hu discloses a device that connects to networks or communication lines of different line protocols thereof, the reference does not disclose a device that is capable of

transferring divided packets without reconstructing the divided packets.

Ghani is applied to the claimed receiving section. In particular, Ghani discloses a method for coupling IP ECN (explicit congestion notification) with ATM congestion control, and not for disclosing a device that couples two networks or communication lines of different line protocols together as in the present invention. Ghani's memory 912 is cited for corresponding to the memory section of the receiving section claimed by Applicants. Referring to column 8, lines 54-65 of Ghani, however, memory 912 is described as being a memory for allowing hardware implementation 900 to buffer the ATM cells received by port 942 and then to transit the buffered ATM cells from the port 942. Therefore, the memory 912 of Ghani does not correspond to the memory section set forth in Applicant's claimed invention, which finds support in the specification in Figure 9, as a memory section for saving the IP header (1004), for example. The memory section is for storing at least one first header with being associated with packet identification information, and when the first header is included in the first packet, storing in the memory section the packet identification information and first header of the first packet with the packet and first header being associated with each other, and executes the functionality of "when the first header is not included (in the first packet), reading out from the memory section a first header, which is stored in association with a packet identification information included in the first packet, among the first headers stored in the memory section."

In the Office Action, Ghani's destination address 714 that is shown in Figure 7 of the reference is cited as corresponding to the packet identification information set forth in the present invention. However, the packet identification information set forth by Applicants is

claimed as being information having a same value for the packets divided from a same packet so as to provide information for determining whether the packet is divided from the same packet or not. As an example of the packet identification information, page 14, lines 8-11 of the specification which discloses a frame ID in which the destination address 3201 and frame ID 3203 are shown to be distinct ones (Figure 31). Accordingly, Ghani's destination address 714 does not correspond to the packet identification information set forth by Applicants.

Le is relied upon in the rejection for disclosing a method for compressing a header field in a data packet. Figure 1 of the reference discloses a header field of a data packet that is compressed when data is transmitted between ANI (access network for structure) 110 and terminal 130. Accordingly, the processing disclosed by Le is not related to a device that links first and second networks or communication lines of different line protocols. Regarding Figure 8 of the Le reference, the header stripper stack 802 cited by the Examiner is disposed in an ANI adapter 112 and header regenerating stack 830 is disposed in the terminal adapter 136. See column 17, lines 32-34 of the reference. As a result, the reference is clearly not describing a linking apparatus as set forth by Applicants.

In the Office Action, it is argued that the complete RTP packet 824 shown in Figure 8 of Le corresponds to the first packet set forth by Applicants. However, Applicants traverse the assertion in that Le states that "at the beginning of a session, an initialization phase is performed to initialize the RTP receiver. In the initialization phase, the header stripper (HS) keeps sending initialization information (Init_Info) until an Ack is received from the receiver. Init_Info consists essentially of the full IP/UDP/RTP header, including an initial time stamp and sequence number when Init_Info is correctly received, the header generator (HR) 822

sends an Ack. Once the header generator 822 has a full header, the HS stops sending full headers. See column 18, lines 51-65 of the Le. As indicated in Figure 11 of the reference, when the HS sends the Ack, the next packet 504 is sent from HS as a packet payload 504 without a header. The complete RTP packet 824 shown in Figure 8 includes IP/UDP/RTP header and voice sample but does not include packet identification information, as claimed.

In the present invention, when the first header is included in the first packet, the packet identification information and first header of the first packet are stored in the memory section with the packet and the first header being associated with each other. When the first header is not included in the first packet, the first header is read out from the memory section and the first header is the one which is stored in association with packet identification information having a same value as that of the packet identification information included in the first packet, among the first headers stored in the memory section in order to output the first packet to which the read out first header is added. Accordingly, it is clear that the packet identification information is included in the present invention, even when the first header is not included (in the first packet), so that the determination as to whether the same packet or not can be made based on the packet identification information being the same value or not. In the packet payload 504 without header that is disclosed by Le, only the field of voice sample is sent and there lacks any packet identification information. Therefore the disclosure by Le is not equivalent to that of the present invention.

In view of the foregoing, claims 1, 10 and 19, which are the independent claims, are not rendered obvious by the Hu, Ghani and Le combination. Therefore, the rejection under 35 U.S.C. §103(a) as being unpatentable over Hu, Ghani and Le should be withdrawn. The

remainder of the claims should be patentable for being dependent from independent claims that are asserted to be allowable for the foregoing reasons, and further for the following reasons.

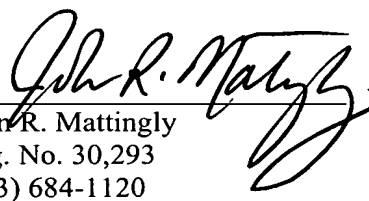
With respect to Odenwald, the reference is relied upon for the disclosing a Fibre Channel format. The rejection states that Odenwald discloses a D_ID (destination ID) 44 in Figure 3 that corresponds to the packet identification information that is claimed by Applicants. However, this destination ID disclosed by Odenwald is not equivalent to the packet identification information claimed by Applicants. The Examiner relies upon TechFest for disclosing an Ethernet format, which Applicants agree is known in the art. However, the destination MAC address on page 1 of the reference does not correspond to the packet identification information claimed by Applicants.

CONCLUSION

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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